

Development of Environment-conscious Products

Main Environment-conscious Products

Nitto Denko has created many products to reduce environmental impact. The main products are described here.

Facilitates recycling
(easy disassembly).

Recyclable, reusable double-coated adhesive tape can be peeled easily without tearing (No. 5000NS)



Facilitates disassembly and recycling of household electrical appliances and OA equipment.

Along with the Household Electrical Appliance Law that went into effect in April 2001, reuse of interior materials of television sets, air-conditioners is promoted, and makers are urged to make products easy to disassemble

to facilitate recycling of parts. To meet this need, Nitto Denko has developed tape that comes off cleanly when peeled.

Doesn't tear or leave adhesive residue when peeled.

Uses strong non-woven fabric as the base. Special adhesive does not leave residue when peeled.

Main applications

Used for adhesive of cushioning and seals for OA equipment such as printers and copiers, and for household electrical appliances such as television sets and air-conditioners. Also used for bonding interior components of cellular telephones and computers.



Saves energy.

Polarization converting system (NIPPCS) for LCDs enhances screen brightness and contributes to energy savings.



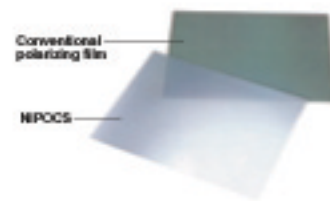
Enhances brightness by 50% or more.

Applying the system to liquid crystal displays (LCD) of computers and cellular telephones converts polarization by 50 to 60%.

Saves energy.

With conventional polarizing film, 50% of the light from the source is wasted. With NIPPCS, the direction of the light is twisted,

and is reused by reflecting it back to the reflection plate of the light source. Increases life by about 30% for screens of conventional brightness.



Easy to dispose of.

Surface protection film for automobile body can be easily incinerated.



Uses materials that can be easily and safely incinerated.

Uses olefinic materials that can be easily incinerated when disposed of. Weight is reduced and disposal facilitated by decreasing thickness of base material and adhesive.

Protects coating from various environmental factors.

Protects automobile coatings from rocks, bird feces, dust during transport and acid rain until the finished automobile is turned over to the consumer.

Coating remains untainted after guard film is peeled off.

The adhesive has no impact on the shine and tone of the coating. Maintains luster of the coating and leaves no residue when peeled off.

Saves energy.

Polyimide copier belts reduce stress on heaters and enhance energy-efficiency.

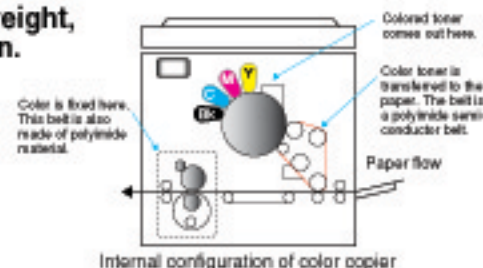


Reduces stress on heaters.

Polyimide belts have less thermal capacity than metal. Stress on heaters is reduced by using for fixing rollers in copiers. Saves energy.

Realizes lightweight, compact design.

Weights less and is more compact than metal rollers.



Easy to incinerate.
Preserves the environment.

Halogen-free semiconductor encapsulating material does not produce toxic gases when incinerated.

Use of halogen eliminated by special flame retardant.

Commonly used halogen flame retardant produces toxic gas when incinerated. By using a special metal hydride in place of halogen, use of this dangerous material is eliminated. Flame resistance of metal hydride is V-0 of UL standards.



Enhances efficiency, saves energy and space.

High polymer membrane/module able to change seawater into potable water. (Spiral UF membrane filter element RS Series)

Energy saving filter.

Efficiently filters dirt from water without using a lot of energy. Can be used for systems that create purified water from wastewater and recycle starch effluent.

Maintains high efficiency for extended period of time.

Improved membrane and element configuration enables "reverse water cleaning" that is impossible with conventional filters. Designed for longer life.



Topics

Initiatives to improve packaging.

Nitto Denko established a company packaging committee in 1992 to find ways to make packing more environment-conscious based on the three concepts of "easy to dispose of" by eliminating toxic substances, "returnable" by use of returnable packaging, and "reduced mass."



■ Nitto Denko uses polyvinyl chloride substitutes that do not produce toxic substances for packaging its products.



■ Packaging using styrene foam is substituted for cardboard



■ Plastic boxes, core and pads are used to make materials returnable.